

Claims

1. A device for generating safe status signals of a vehicle (9) that is movable along a given guideway (1), comprising data transmitters (2, 11) stationarily disposed along said guideway (1) and provided with data, data acquisition units (21) mounted on the vehicle (9) and used for scanning the data transmitters (2, 11) and for supplying data signals, and an evaluation device (24) connected to said data acquisition units (21) for evaluating the data signals, characterized in that there are at least two of the data acquisition units (21) connected to the evaluation device (24) and that the evaluation device (24) has an output (25) for delivering safe status signals when and as long as at least two data acquisition units (21) supply matching data.
- 5 2. A device according to Claim 1, characterized in that at least two stationary disposed data transmitters (2, 11) are mounted at the guideway (1) and that the vehicle (9) comprises at least four data acquisition units (21) assigned in pairs to said data transmitters (2, 11).
- 10 3. A device according to Claim 1 or 2, characterized in that the data transmitter comprise first position transmitters provided with absolute location data (12).
- 15 4. A device according to Claim 3, characterized in that the data transmitters (11) are comprised of position transmitters provided with binary-code location data.
5. A device according to any of the preceding Claims 1 or 4, characterized in that the data transmitters (2) comprise second position transmitters provided with relative location data (3).
- 20 6. A device according to Claim 5, characterized in that the second information transmitters (2) are comprised of long-stators of long-stator linear motors for driving said vehicle (9), said long-stators being comprised of grooves (3) and teeth (4) and disposed along said guideway (1).
- 25 7. A device according to Claim 5 or 6, characterized in that the data acquisition unit (21) is comprised at least of one first sensor (14) for the absolute location data and of a second sensor (17) for the relative location data.
8. A device according to Claim 7, characterized in that the evaluation device (24) is so

configured that it evaluates those location data as correct that are issued by the relevant other sensor (17 and/or 14) of the same data acquisition unit (21) if one of the two sensors (14, 17) of said data acquisition unit (21) fails to work.

9. A device according to any of the preceding Claims 1 to 8, characterized in that the
5 evaluating device (24) is configured for supplying safe location, speed and/or direction signals for said vehicle (9).
10. A device according to Claim 9, characterized in that the evaluation device (24) is so configured that the safe speed and direction signals can be derived from the relative location data.
- 10 11. A device according to any of the preceding Claims 1 to 10, characterized in that at least eight data acquisition units (21) are provided on the vehicle (9) which are arranged in pairs at the front and rear area and on the right and left side each of the vehicle.
- 15 12. A device according to any of the preceding Claims 2 to 11, characterized in that the evaluating device (24) is so configured that the reliable status signals are only generated if a majority of the data acquisition units (21) supplies matching data signals.
13. A device according to any of the preceding Claims 1 to 12, characterized in that the evaluation device (24) comprises of at least two computer systems connected to the same data acquisition units (21) and that a status signal is only issued if both computer systems supply matching location data.
- 20 14. A device according to Claim 13, characterized in that the two computer systems are differently configured in terms of their hardware and/or software.